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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Nobushige Aoki

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EXAMINER

HASSAN, AURANGZEB

ART UNIT

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/679,335	Applicant(s) AOKI ET AL.	
	Examiner AURANGZEB HASSAN	Art Unit 2182	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 May 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,5 and 20-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,5 and 20-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 5/4/2009 has been entered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 5, 20 – 22 and 25 – 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Narusawa et al. (US Publication Number 2003/0085942 hereinafter “Narusawa”) in view of Leslie (US Publication Number 2003/0142325) further in view of Kitamura et al. (US Patent Number 6,947,158, hereinafter “Kitamura”).

4. As per claims 1 and 25, Narusawa teaches a print system and method, in which a printer (printer 1, figure 1) and a host computer (paragraph [0085]), each of which

includes a communication interface for transmitting and receiving information in real time (communication via interface 29, figure 2); are connected to each other to communicated with each other, comprising:

the printer comprising:

a read-out unit (13, figure 1) for reading out image data from a recording medium for recording the image data (reads image data from detachable recording medium);

an operation panel including a plurality of operation members (user interface, figure 5), each for receiving an instruction from a user, wherein the plurality of operation members includes at a print instruction button, a preview display button and a print setting button (figure 7 shows the panel in operation, paragraph [0091 & 0120-0121]);

a printer engine (28, figure 2) for performing printing (paragraph [0084]),

an operation panel controller for effecting control so as to cause the printer engine to print image data read out from the detachable recording medium of the printer if the print instruction button is operated by the user without operating the preview display button (paragraphs [0083-0084]), and if one of the print instruction button and the print setting button is operated by the user subsequently to operation of the preview display button (paragraphs [0083-0084 & 0094-0096]) interruption event to transmit (interrupt generation, paragraph [0083]), and transmitting the print setting information (paragraph [0086]).

Narusawa teaches an embodiment of a stand-alone printer in which an interrupt is generated and transmitted within the printer and printer controller however does not explicitly describe notifying a host computer of the interrupt event. However it would

have been obvious to one of ordinary skill in the art to utilize the printer of Narusawa with a host computer via the communication interface (host computer can be connected via interface 29, figure 2, paragraph [0085]), therein the host computer receiving a notification of an interrupt event from the printer. One of ordinary skill in the art would be motivated to make such modification in order to have increased flexibility in data printing (paragraphs [0003, 0004 & 0085]).

Narusawa does not explicitly disclose a transmission unit in the printer and the details of the functionality of the host computer.

Leslie teaches a printer communicating with a host computer wherein, the printer (14, figure 1) comprises:

a transmission unit for transmitting the image data which is read out by the read-out unit (transmission unit carries out step 74 to 76 in transmitting the print setting to the host computer, paragraph [0041]); and

the host computer (12, figure 1) comprising:

an interruption controller for, in response to the preview display button being operated, detecting the interruption even transmitted by the printer (host computer utilizes built-in controller to recognize the transmission of data from the printer, 18, figure 1);

receiving unit for receiving, from the printer the print setting information generated by the printer and the image data read out from the detachable recording medium of the printer (image data read out from medium incorporated from Narusawa paragraph [0091]), if the interruption controller detects that the interruption event

transmitted by the printer is the corresponding interruption event which is generated and transmitted by the operation panel controller of the printer in accordance with the print setting button being operated subsequently (in response to the interrupt and transmitted data, host computer receives print image data, paragraph [0041]); and

display control unit (16, figure 1) for causing a display apparatus to effect a print preview display on the basis of print setting information and image data received by the receiving unit (host displays print setting on 16a, figure 1, paragraphs [0041 - 0042]).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to enhance the print preview function of Narusawa with the image updates on the host display of Leslie. One of ordinary skill would be motivated to make such modification in order to enhance a true depiction of data printing (paragraph [0012]).

The combination of Narusawa and Leslie does not explicitly disclose a print instruction generation unit in a host computer.

Kitamura teaches a print instruction generation unit for generating the print instruction including print image data and transmitting the generated print instruction to the printer (preview is displayed, figure 3), if the interruption controller (printer driver 21, figure 2, determines interrupts in light of Narusawa and Leslie) detects that the interruption event transmitted by the printer is the corresponding interruption event which is generated and transmitted by the operation panel controller of the printer in accordance with the print instruction button (element 34, operation panel with buttons,

figure 3) being operated subsequently to the operation of the preview display button (column 4, lines 16 - 35).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify Narusawa/Leslie with the above teachings of Kitamura. One of ordinary skill would be motivated to make such modification in order to enhance user flexibility in a printing system (column 1, lines 57 – 63).

The Examiner makes a note to the Applicant that Narusawa teaches an interrupt controller for detecting print settings on the printer along with a display which responds with a preview of the settings established by the user in the embodiment of a digital camera as seen in figure 12. Narusawa states that a computer, mobile telephone and portable remote terminals also have all of the same functionality as described for the digital camera (paragraphs [0085 & 0126]).

5. As per claims 5 and 26, Narusawa teaches a print system and method, wherein the printer includes a direct print controller for effecting printing not through the computer so that printing is executable with the printer alone (stand-alone printer, paragraph [0078]).

6. As per claims 20 and 27, Narusawa teaches a print system and method, wherein the host computer further comprises a generating unit for receiving image data read out from a detachable memory card of the printer (memory card 2 is detachable to card slot

13, figure 1), and generating print data corresponding to the print setting information, from the received image data (paragraph [0118]).

7. As per claims 21 and 28, Narusawa teaches a print system and method, wherein at every interruption event which is generated and transmitted by the printer in accordance with the print setting button being operated subsequently to the operation of the preview display button, the display control unit causes the display apparatus to effect the print preview display in which the print setting information changed at every interruption event is reflected (user pushes various buttons and the selected print-condition setting file is effected, figure 14, paragraph [0118]).

8. As per claims 22 and 29, Narusawa teaches a print system and method, wherein the printer starts printing on the basis of the print instruction transmitted by the host computer when the host computer receives the interruption event corresponding to an operation of the print button of the operational panel (paragraphs [0120-0121]).

9. As per claims 32 and 34, Narusawa/Leslie teaches a system and method wherein the print system is arranged so that in a case where the host computer effects the print preview display, the host computer generates print data and the printer receives the print data generated by the host computer and prints the generated print data (step 68, result of "YES" figure 5), and in case where the host computer does not

effect the print preview display, the printer generates print data and prints the print data generated thereby (step 68, result of "NO" figure 5).

10. Claims 23, 24, 30 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Narusawa in view of Kitamura.

11. As per claims 23 and 30, Narusawa teaches a print system and method, in which a printer (figure 1) and a host (element 3, figure 12), each of which includes a communication interface for transmitting and receiving information in real time (USB figure 12), are connected to each other to communicate with each other, the host comprising:

- a detecting unit for, responsive to the preview display button, detecting an interruption event generated and transmitted by the printer (interrupt generation, paragraph [0083, 0091, 0120 & 0121] in communication with host [0085], figure 5);

- a receiving unit for receiving image data read out by the printed from a detachable memory card, if the detection unit detects the interruption event which is generated and transmitted by the printer in accordance with the print setting button being operated subsequently to the operation of the preview display button (paragraphs [0090-0092]);

- print preview display control unit for (element 139, figure 13), in response to the detection of the interruption event which is generated and transmitted by the printer in accordance with the print setting button being operated subsequently to the operation of

the preview display button, obtaining a print setting generated by the printer when the print setting button is operated (setting from panel save in memory card, paragraph [0118]) and controlling a display apparatus of the host to effect a print preview display by applying the obtained print setting to the received image data so that the print setting is reflected therein (figure 15).

Narusawa does not explicitly disclose the functionality of the host is comprised in the host computer, however does say that the host can be a host computer interchangeably with full functionality (paragraphs [0085 & 0126]).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to utilize the host computer environment or the digital camera environment interchangeably as taught by Narusawa (paragraphs [0085 & 0126]). One of ordinary skill would be motivated to utilize such environment to accommodate a user-friendly interface (paragraph [0009]).

Narusawa does not explicitly disclose a print instruction print preview generation unit in a host computer.

Kitamura teaches a print instruction generation unit for generating a print instruction including print image data and transmitting the generated print instruction to the printer so that the printer effects printing on the basis of the print instruction (preview is displayed, figure 3), if the detecting unit (printer driver 21, figure 2, determines interrupts in light of Narusawa and Leslie) detects the interruption event which is generated and transmitted by the printer in accordance with the print instruction button

Art Unit: 2182

(element 34, operation panel with buttons, figure 3) which is operated subsequently to the operation of the preview display button (column 4, lines 16 - 35).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify Narusawa with the above teachings of Kitamura. One of ordinary skill would be motivated to make such modification in order to enhance user flexibility in a printing system (column 1, lines 57 – 63).

12. As per claims 24 and 31, Narusawa teaches a print system and method, wherein the print preview display control unit updates the print preview display every time the print setting is changed in accordance with the operation of the print setting button (selected print condition is effected, paragraphs [0118-0119]).

13 As per claims 33 and 35, Narusawa/Leslie teaches a system and method wherein the print system is arranged so that in a case where the host computer effects the print preview display, the host computer generates print data and the printer receives the print data generated by the host computer and prints the generated print data (step 68, result of “YES” figure 5), and in case where the host computer does not effect the print preview display, the printer generates print data and prints the print data generated thereby (step 68, result of “NO” figure 5).

Response to Arguments

14. Applicant's arguments with respect to claims 1, 5, 20 – 35 have been considered but are moot in view of the new ground(s) of rejection.

The Applicant argues claim limitations of certain buttons having functionality of an operation panel controller and interrupt generation. All of the applicant's arguments pertain to newly amended claims thus the arguments are moot in view of the newly cited prior art.

Furthermore the Applicant argues that Kitamura does not teach an operation panel or an operation button of a printer. With regards to the Applicant's arguments the Examiner respectfully disagrees. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). The Examiner relies upon a different reference for the teachings of a printer with an interrupt generating operational panel.

Conclusion

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US Publication Number 2005/0275872 teaches a printer with a memory card reader integrated on the surface of the printer further coupled to a computer. The system allows for data enhancement of images stored on the card and the Examiner further cites the functionality of an operating system and the print preview functionality inherited therein. Operating systems further include drivers to handle and

Art Unit: 2182

process interrupts from devices that are connected to the computer. The Examiner also makes US Publication Number 2002/0054350 of record as pertinent prior art as it teaches a printer with memory card and stand-alone capabilities as well as functionality of being coupled with a computer. As well as copending application US Publication Number 2004/0080778 which teaches all of the components of the current application with the variation of the operational panel being external of the printer.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to AURANGZEB HASSAN whose telephone number is (571)272-8625. The examiner can normally be reached on Monday - Friday 9 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq Hafiz can be reached on (571)272-6729. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2182

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AH

/Tariq Hafiz/

Supervisory Patent Examiner, Art Unit 2182